

REMARKS

In view of the above amendments and the following remarks, reconsideration of the objections and rejections set forth in the Office Action of April 17, 2007 is respectfully requested.

As an initial matter, the Examiner objected to claim 17 due to an insufficient distinction between the standby and the hibernate states. Specifically, the Examiner asserted that "neither state is defined, yet both result in the same end result". The Applicants agree that the "standby state" and the "hibernate state" were not defined in original claim 17 (at least to the extent that these states are distinguishable from each other). However, the Applicants note that these various states are clearly defined at various locations in the original specification. For example, paragraph [0014] and paragraph [0052] both describe the various operating states of the operating system of the vehicle-installed apparatus of the present invention, including defining the distinctions therebetween. Nonetheless, in an effort to further prosecution in this application, the Examiner is requested to note that dependant claim 17 has now been amended so as to define the "standby state" and the "hibernate state" based on the description provided in the specification. Thus, it is submitted that the Examiner's objection to claim 17 has been overcome. Furthermore, because the operating states in claim 17 would have been defined in view of the specification even if no amendments were made to claim 17, it is submitted that the amendments to claim 17 simply serve to explicitly recite the definition of several terms which were defined only in the specification. Thus, it is submitted that these amendments are simply clerical in nature, and do not necessitate further searching and consideration by the Examiner. Accordingly, the amendments should be entered despite the finality of the outstanding Office Action.

Independent claim 13 and dependent claims 14-17 are presently pending in this application. On pages 2-7 of the Office Action, the Examiner rejected independent claim 13 as being unpatentable over the Kirkhart reference (USP 6,055,479) in view of the Levine reference (US Publication 2003/0135327); and also rejected independent claim 13 as being unpatentable over the Kirkhart reference in view of the Amano reference (USP 6,806,588). Furthermore, the

Examiner rejected dependent claims 14-17 as being unpatentable over the Kirkhart reference in view of the Levine reference, or as being unpatentable over the Kirkhart reference in view of the Amano reference, and further in view of the Kim reference and the Levine reference. However, these rejections are respectfully traversed. For the reasons discussed below, it is submitted that independent claim 13 is clearly distinguishable from the prior art as applied by the Examiner.

The Invention of Independent Claim 13

Independent claim 13 is directed to a vehicle-installed apparatus to be installed in a vehicle having a main power source. The apparatus comprises (in part):

- (1) A *dedicated* secondary battery for supplying power *only* to the vehicle-installed apparatus;
- (2) A secondary battery control section; and
- (3) If an unlocking/locking detection section detects that the door of the vehicle is unlocked, the secondary battery control section is operable to boot up the vehicle-installed apparatus by:

*starting a power supply from the secondary battery to the vehicle-installed apparatus **only** when a state determining section has determined that the operating system of the vehicle-installed apparatus is in a state such that the vehicle-installed apparatus cannot be booted up unless an initial boot-up is performed.*

The three elements described above are explained on pages 18-21 of the specification. Specifically, paragraph [0052] of the specification explains the various states of the operating system which are detected by the state determining section. Specifically, if the “end state” is detected, then the vehicle-installed apparatus is not booted up unless an initial boot-up is performed. Specifically, as explained in paragraph [0058], if the state determining section of the power control unit determines that the vehicle-installed apparatus is in the end state, then the dedicated secondary battery 119 supplies power only to the vehicle-installed apparatus (see also

paragraph [0042] and Figure 3, step S10). In other words, the secondary battery control section is operable to control the dedicated secondary battery so that, if the door of the vehicle is unlocked, the vehicle-installed apparatus is booted up by supplying power from the dedicated secondary battery to the vehicle-installed apparatus *only* when the state determining section has determined that the operating system of the vehicle-installed apparatus is in a state (i.e., an “end state”) such that the vehicle-installed apparatus cannot be booted up unless an initial boot-up is performed.

Because the apparatus of independent claim 13 comprises a *dedicated* secondary battery for supplying power *only* to the vehicle-installed apparatus, and because the secondary battery control section is provided for supplying power from the secondary battery to the vehicle-installed apparatus *only* if the operating system of the vehicle-installed apparatus cannot be booted up unless an initial boot-up is performed, the dedicated secondary battery will not be wasted. Consequently, the life of the dedicated secondary battery can be prolonged, ensuring that there will be a power supply for booting up the vehicle-installed apparatus when necessary (see paragraph [0063]).

The Prior Art References

The combination of prior art references applied by the Examiner do not teach or even suggest each of the three features discussed above which are recited in independent claim 13.

(1) Firstly, as acknowledged by the Examiner on page 3 of the outstanding Office Action, the Kirkhart reference does not teach or suggest a dedicated secondary battery. However, in asserting that the Levine and the Amano references do teach such a dedicated secondary battery, the Examiner appears to have ignored the rest of the language in independent claim 13 describing the dedicated secondary battery. Specifically, claim 13 recites that the dedicated secondary battery supplies power *only* to the vehicle-installed apparatus. The secondary references applied by the Examiner do not teach this arrangement of a secondary battery.

The Examiner asserted that the Levine reference teaches a dedicated secondary battery, and referred to paragraph [0112] and claim 6. This portion of the Levine reference, however,

merely teaches that an inertial navigation system “may contain a built-in battery power source (either as primary, or back up)”, but does not even suggest that the “back up” battery power source is a *dedicated* battery for supplying power *only* to a vehicle-installed apparatus. In fact, there are no details provided suggesting how such a back up battery power source should be arranged.

The Examiner also asserted that the Amano reference teaches a dedicated secondary battery. However, as previously explained in the remarks submitted on March 7, 2007, the Amano reference teaches that the main battery 1 and the auxiliary battery 2 are *interconnected* and are each general-purpose batteries for supplying power to various components of a vehicle (see column 3, lines 23-45). Thus, neither the main battery 1 nor the auxiliary battery 2 of the Amano reference constitutes a *dedicated* secondary battery for supplying power *only* to the vehicle-installed apparatus.

In addition, the Kim reference also does not teach or suggest a dedicated secondary battery for supplying power only to a vehicle-installed apparatus, as recited in independent claim 13. Therefore, it is submitted that the prior art applied by the Examiner does not teach or even suggest this first element.

(2) Because the prior art does not teach or suggest the dedicated secondary battery of claim as noted above, it follows that the prior art also does not even suggest any form of secondary battery *control section*. At the top of page 3 of the outstanding Office Action, however, the Examiner asserted that the Kirkhart reference teaches a battery control section for booting up an apparatus by starting a power supply from the battery, and it *appears* as though the Examiner is taking the position that this “battery control section” corresponds to the secondary battery control section as recited in independent claim 13. However, because the Examiner acknowledged that the Kirkhart reference does not teach a dedicated secondary battery, it is not clear how the Kirkhart reference can teach a control section for a component that does not exist. It is further noted that the Levine reference, the Amano reference, and the Kim reference also do not teach or suggest a secondary battery control section.

(3) Thirdly, it appears that the Examiner has completely disregarded at least a portion of the functional language recited in claim 13 describing the secondary battery control section. In this regard, it has been well established that limitations in apparatus claims which are recited using functional language must be evaluated and considered just like any other limitation of a claim. See *K-2 Corp v. Salomon S. A.*, 191 F.3d 1356, 1362, 52 USPQ2d 1001, 1010 (Fed. Cir. 1999) (“The functional language is, of course, an additional limitation in the claim.”). In the outstanding Office Action, the Examiner has not even attempted to explain how the applied prior art teaches a control section which is operable to boot up a vehicle-installed apparatus by starting a power supply from a secondary battery to a vehicle-installed apparatus *only* when a state determining section has determined that the operating system of the vehicle-installed apparatus is in such a state that it cannot be booted up unless an initial boot-up is performed. In this regard, it is worth noting that the battery control section of the Kirkhart reference is significantly different than the secondary battery control section of claim 13, and is not operable to start a supply of power *based on the status of an operating system*. Instead, the Kirkhart reference simply teaches that a CPU can be warmed up when a driver is detected (col 4, lines 31-39).

Moreover, as noted above, the prior art of record does not teach or even suggest *any* secondary battery control section for controlling a dedicated secondary battery. Therefore, it follows that the prior art also does not teach or suggest a secondary battery control section which is operable to perform the recited function discussed above.

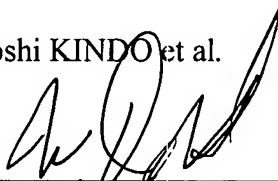
As explained above, the Kirkhart reference, the Levine reference, the Amano reference, and the Kim reference do not, either alone or in combination, disclose or even suggest at least three of the features recited in independent claim 13 and discussed above. Therefore, it is respectfully submitted that independent claim 13 is clearly not rendered obvious by the prior art as applied by the Examiner.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. However, if the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact the Applicant's undersigned representative.

Respectfully submitted,

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June 27, 2007